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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
REDDY, KARUNA P				
ART UNIT		PAPER NUMBER		
1796				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/539,132

Examiner

KARUNA P. REDDY

Applicant(s)

SCHULTES ET AL.

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2009.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18 and 20-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18 and 20-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-845)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment filed 1/6/2009. Claims 1-17 and 19 are cancelled; claims 18, 24 and 32 are amended. Accordingly, claims 18, 20-38 are currently pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 18, 20-23, 25-31 and 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of DeWitt (US 4, 173, 596).

Hofmann discloses a multistage, sequential process for making an acrylic graft copolymer. Upon blending with a non-resilient methacrylic matrix resin, followed by molding, an impact resistant molded product is obtained (abstract).

See example 8 for the process of making a four stage resin, where initial charge comprises 20,000 g of water and 3.6 g of SDOSS (sodium dioctyl sulfosuccinate) an emulsifier (read on wt% of emulsifier and water in claim 20). The proportion of monomers in stage 2 (2820 g MMA, 180 g EA and 12 g ALMA), stage 3 (4863 g BA, 1110 g S, and 110 g ALMA), and stage 4 (2256 g MMA and 144 g EA) read on the proportions of monomers in stage 1, 2 and 3 respectively of claim 18. $K_2S_2O_8$ i.e. potassium peroxodisulphate (KPS) in demineralized water was added to initiate polymerization reaction. The monomer mixture in stages 3 and 4 (equivalent of stages 2

and 3 of present claims) is metered in over a period of several minutes. The first stage is used as a seed or core around which either more of the first stage or subsequent stages are polymerized in layers (column 2, lines 57-60).

Generally, the final particle size should be preferably between about 0.15 to 0.35 microns i.e. 150 to 250 nm (column 2, line 68, column 3, line 1). A blend of 20 lbs. of graft polymer (i.e. core-shell polymer particle) and 30 lbs. of Lucite® 47F (MMA/EA; 94/6) was prepared and the blend was extruded in a twin screw extruder (column 10, lines 18-20).

Hofmann differs with respect to initial charge which is an emulsion of a seed latex whose particle radius is 3.0 to 20 nm; total weight of components A-J, based on total weight of aqueous dispersion; properties of molded product and amount of coagulate in the dispersion.

However, DeWitt teaches improved impact modifiers prepared by emulsion polymerization in the presence of seed latex (column 2, lines 66-68). Latex is initially provided wherein polymer particles are dispersed in an aqueous medium. These polymer particles have an average size range of from about 200 to about 2,000 Å units (column 3, lines 59-62) i.e. 20 to 200 nm. Therefore, it would have been obvious to continue the polymerization of first stage, in Hofmann, until a seed polymer with a particle size of 20 nm to 200 nm (i.e. radius of 10 nm to 100 nm) is obtained because DeWitt teaches using seed latex having a particle size of 20 to 200 nm to obtain a core-shell polymer particle that provides improved impact strength.

With respect to the total weight of components A-J, proportion of monomers in examples of Hofmann read on the proportion of components A-J of instant invention. The amount of solvent i.e. water used to form emulsion or dispersion is within the scope

of a skilled artisan and can be varied depending on the desired solids content and end use requirements, absent evidence of unexpected results.

With respect to the properties of molded product and amount of coagulate in the dispersion, given that prior art teaches / discloses essentially the same molding composition and aqueous dispersion is made by a substantially similar process as that of the claimed, one of ordinary skill in the art would have a reasonable basis to believe that the molding composition of prior art would exhibit essentially the same properties under similar test conditions and aqueous dispersion would contain less than 5% by weight of coagulate. Since PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobviousness difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

4. Claims 18, 20-21, 25-31 and 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of Takarabe et al (US 4, 914, 142).

Hofmann discloses a multistage, sequential process for making an acrylic graft copolymer. Upon blending with a non-resilient methacrylic matrix resin, followed by molding, an impact resistant molded product is obtained (abstract).

See example 8 for the process of making a four stage resin, where initial charge comprises 20,000 g of water and 3.6 g of SDOSS (sodium dioctyl sulfosuccinate) an emulsifier (read on wt% of emulsifier and water in claim 20). The proportion of monomers in stage 2 (2820 g MMA, 180 g EA and 12 g ALMA), stage 3 (4863 g BA, 1110 g S, and 110 g ALMA), and stage 4 (2256 g MMA and 144 g EA) read on the proportions of monomers in stage 1, 2 and 3 respectively of claim 18. $K_2S_2O_8$ i.e. potassium peroxodisulphate (KPS) in demineralized water was added to initiate

polymerization reaction. The monomer mixture in stages 3 and 4 (equivalent of stages 2 and 3 of present claims) is metered in over a period of several minutes. The first stage is used as a seed or core around which either more of the first stage or subsequent stages are polymerized in layers (column 2, lines 57-60).

Generally, the final particle size should be preferably between about 0.15 to 0.35 microns i.e. 150 to 250 nm (column 2, line 68, column 3, line 1). A blend of 20 lbs. of graft polymer (i.e. core-shell polymer particle) and 30 lbs. of Lucite® 47F (MMA/EA; 94/6) was prepared and the blend was extruded in a twin screw extruder (column 10, lines 18-20).

Hofmann is silent with respect to initial charge of an aqueous emulsion of a long chain alcohol; total weight of components A-J, based on the total weight of aqueous dispersion; properties of molded product, and amount of coagulate in the dispersion.

However, Takarabe et al teach a method by which a highly monodisperse emulsion polymer can be produced while the occurrence of a coagulum or new particles during the polymerization is inhibited to a low level (column 2, lines 30-36). The object is achieved by adding a polymerizable monomer to an emulsion polymer containing a high-molecular weight compound as a seed polymer and thereafter, polymerizing the monomer in presence of a film forming aid (column 2, lines 37-46). Typical examples of the film-forming aid include ethylene glycol, isopropyl benzyl alcohol and alkyl-substituted glycols having 3 to 8 carbon atoms (column 3, lines 24-46). Therefore, it would have been obvious at the time invention was made to add film forming aid such as alcohol to the initial charge of Hofmann to obtain a highly monodisperse emulsion comprising core-shell polymer particle while maintaining coagulum or new particle formation at a low level.

With respect to total weight of components A-J, the proportion of monomers in examples of Hofmann read on the proportion of components A-J of instant invention. The amount of solvent i.e. water used to form emulsion or dispersion is within the scope of a skilled artisan and can be varied depending on the desired solids content and end use requirements, absent evidence of unexpected results.

With respect to the properties of molded product, given that prior art teaches / discloses essentially the same molding composition and is made by a substantially similar process as that of the claimed, one of ordinary skill in the art would have a reasonable basis to believe that the molding composition of prior art would exhibit essentially the same properties under similar test conditions. Since PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobviousness difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

With respect to the amount of coagulum in aqueous dispersion, given that Hofmann teaches a substantially similar process for forming an aqueous dispersion and Takarabe et al teach polymerizing monomers in the presence of film forming aids such as ethylene glycol, isopropyl benzyl alcohol and alkyl-substituted glycols to obtain dispersions with low level of coagulum, one of ordinary skill in the art would have a reasonable basis to believe that the aqueous dispersion of Hofmann in view of Takarabe et al would have coagulum content of less than 5% by weight. Since PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobviousness difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

5. Claims 18, 20-21, 24-31 and 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of Morningstar et al (US 4, 371, 677).

Hofmann discloses a multistage, sequential process for making an acrylic graft copolymer. Upon blending with a non-resilient methacrylic matrix resin, followed by molding, an impact resistant molded product is obtained (abstract).

See example 8 for the process of making a four stage resin, where initial charge comprises 20,000 g of water and 3.6 g of SDOSS (sodium dioctyl sulfosuccinate) an emulsifier (read on wt% of emulsifier and water in claim 20). The proportion of monomers in stage 2 (2820 g MMA, 180 g EA and 12 g ALMA), stage 3 (4863 g BA, 1110 g S, and 110 g ALMA), and stage 4 (2256 g MMA and 144 g EA) read on the proportions of monomers in stage 1, 2 and 3 respectively of claim 18. $K_2S_2O_8$ i.e. potassium peroxodisulphate (KPS) in demineralized water was added to initiate polymerization reaction. The monomer mixture in stages 3 and 4 (equivalent of stages 2 and 3 of present claims) is metered in over a period of several minutes. The first stage is used as a seed or core around which either more of the first stage or subsequent stages are polymerized in layers (column 2, lines 57-60).

Generally, the final particle size should be preferably between about 0.15 to 0.35 microns i.e. 150 to 250 nm (column 2, line 68, column 3, line 1). A blend of 20 lbs. of graft polymer (i.e. core-shell polymer particle) and 30 lbs. of Lucite® 47F (MMA/EA; 94/6) was prepared and the blend was extruded in a twin screw extruder (column 10, lines 18-20).

Hofmann is silent with respect to initial charge of an aqueous emulsion of a long chain alcohol; total weight of components A-J, based on total weight of aqueous dispersion; properties of molded product; amount of coagulate in the dispersion.

However, Morningstar et al disclose a process for making dispersion copolymers (abstract). The addition of long straight chain saturated alcohol, containing from 8 to 24 carbon atoms, in the emulsifier system increases colloidal stability of the polymerization and reduces the amount of coagulum in the copolymer latex. Examples of such alcohols include dodecanol, tridecanol, tetradecanol, docosanol etc. (column 3, lines 28-40). Therefore, it would have been obvious to add long straight chain saturated alcohol containing from 12 to 22 carbon atoms to the initial charge of Hofmann for reducing the amount of coagulum in the copolymer latex.

With respect to total weight of components A-J, the proportion of monomers in examples of Hofmann read on the proportion of components A-J of instant invention. The amount of solvent i.e. water used to form emulsion or dispersion is within the scope of a skilled artisan and can be varied depending on the desired solids content and end use requirements, absent evidence of unexpected results.

With respect to the properties of molded product, given that prior art teaches / discloses essentially the same molding composition and is made by a substantially similar process as that of the claimed, one of ordinary skill in the art would have a reasonable basis to believe that the molding composition of prior art would exhibit essentially the same properties under similar test conditions. Since PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobviousness difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

With respect to the amount of coagulum in aqueous dispersion, given that Hofmann teaches a substantially similar process for forming an aqueous dispersion and Morningstar et al teach that addition of long straight chain saturated alcohol, containing from 8 to 24 carbon atoms, in the emulsifier system increases colloidal stability of polymerization and reduces the amount of coagulum in copolymer latex, one of ordinary skill in the art would have a reasonable basis to believe that aqueous dispersion of Hofmann in view of Morningstar et al would have coagulum content of less than 5% by weight. Since PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobviousness difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of DeWitt (US 4, 173, 596) as applied to claim 30 above, and further in view of Falk et al (US 4, 542, 179).

The discussion with respect to Hofmann in view of DeWitt in paragraph 3 above is incorporated here by reference.

Hofmann in view of DeWitt is silent with respect to the use of styrene-acrylonitrile in the molding composition.

However, Falk et al teach that addition of styrene-acrylonitrile copolymer to acrylic core-shell polymers reduces mold shrinkage and improves surface hardness. The styrene-acrylonitrile copolymer resins useful in the practice of this invention are copolymers of styrene and acrylonitrile comprising from 50 to 90% by weight of styrene and 10 to 50% by weight of acrylonitrile. Therefore, it would have been obvious to one skilled in the art at the time invention was made to add styrene-acrylonitrile copolymers

to the molding composition containing core-shell polymers of Hofmann in view of DeWitt, and obtain a mold with reduced shrinkage and improved surface hardness.

7. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of DeWitt (US 4, 173, 596) as applied to claim 30 above, and further in view of Shah et al (US 5, 777, 034).

The discussion with respect to Hofmann in view of DeWitt in paragraph 3 above is incorporated here by reference.

Hofmann in view of DeWitt is silent with respect to the molding composition comprising 0.1 to 10.0% by weight of another polymer with a molecular weight higher by at least 10% than that of (meth)acrylic polymer.

However, Shah et al teach a methacrylate resin blend composition having improved solvent craze resistance. The improvement is achieved in a simple way while retaining the blend composition's desirable properties such as weather resistance, molding, impact resistance and mechanical properties (column 1, lines 1-10). The blend composition contains a methacrylate matrix resin, particles of a single layer polymer and optionally an acrylic multi-layer polymer. The particles of a single layer polymer have a weight average molecular weight of at least 120% of the M_w of the methacrylate matrix resin component (abstract). The simple incorporation of SLP's (single layer polymer) into the methacrylate matrix resin provides the improvement in craze resistance (column 4, line 67; column 5, lines 1-3). The matrix resin will comprise 50 to 90 wt%, the impact modifier resin from 0 to 50 wt% and the single layer polymer from 1 to 50 wt% of the blend composition (column 6, lines 42-45). Therefore, it would have been obvious to one skilled in the art at the time invention was made to add a polymer having a

molecular weight of at least 120% of the M_w of methacrylate resin of Hofmann in view of DeWitt, in an amount of from 1 to 50 wt% and obtain a molding composition that will exhibit improved solvent craze resistance.

8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of Takarabe et al (US 4, 914, 142) as applied to claim 30 above, and further in view of Falk et al (US 4, 542, 179).

The discussion with respect to Hofmann in view of Takarabe et al in paragraph 4 above is incorporated here by reference.

Hofmann in view of Takarabe et al is silent with respect to the use of styrene-acrylonitrile in the molding composition.

However, Falk et al teach that addition of styrene-acrylonitrile copolymer to acrylic core-shell polymers reduces mold shrinkage and improves surface hardness. The styrene-acrylonitrile copolymer resins useful in the practice of this invention are copolymers of styrene and acrylonitrile comprising from 50 to 90% by weight of styrene and 10 to 50% by weight of acrylonitrile. Therefore, it would have been obvious to one skilled in the art at the time invention was made to add styrene-acrylonitrile copolymers to the molding composition containing core-shell polymers of Hofmann in view of Takarabe et al, and obtain a mold with reduced shrinkage and improved surface hardness.

9. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of Takarabe et al (US 4, 914, 142) as applied to claim 30 above, and further in view of Shah et al (US 5, 777, 034).

The discussion with respect to Hofmann in view of Takarabe et al in paragraph 4 above is incorporated here by reference.

Hofmann in view of Takarabe et al is silent with respect to the molding composition comprising 0.1 to 10.0% by weight of another polymer with a molecular weight higher by at least 10% than that of (meth)acrylic polymer.

However, Shah et al teach a methacrylate resin blend composition having improved solvent craze resistance. The improvement is achieved in a simple way while retaining the blend composition's desirable properties such as weather resistance, molding, impact resistance and mechanical properties (column 1, lines 1-10). The blend composition contains a methacrylate matrix resin, particles of a single layer polymer and optionally an acrylic multi-layer polymer. The particles of a single layer polymer have a weight average molecular weight of at least 120% of the M_w of the methacrylate matrix resin component (abstract). The simple incorporation of SLP's (single layer polymer) into the methacrylate matrix resin provides the improvement in craze resistance (column 4, line 67; column 5, lines 1-3). The matrix resin will comprise 50 to 90 wt%, the impact modifier resin from 0 to 50 wt% and the single layer polymer from 1 to 50 wt% of the blend composition (column 6, lines 42-45). Therefore, it would have been obvious to one skilled in the art at the time invention was made to add a polymer having a molecular weight of at least 120% of the M_w of methacrylate resin of Hofmann in view of Takarabe et al, in an amount of from 1 to 50 wt% and obtain a molding composition that will exhibit improved solvent craze resistance.

10. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of Morningstar et al (US 4, 371, 677) as applied to claim 30 above, and further in view of Falk et al (US 4, 542, 179).

The discussion with respect to Hofmann in view of Morningstar et al in paragraph 5 above is incorporated here by reference.

Hofmann in view of Morningstar et al is silent with respect to the use of styrene-acrylonitrile in the molding composition.

However, Falk et al teach that addition of styrene-acrylonitrile copolymer to acrylic core-shell polymers reduces mold shrinkage and improves surface hardness. The styrene-acrylonitrile copolymer resins useful in the practice of this invention are copolymers of styrene and acrylonitrile comprising from 50 to 90% by weight of styrene and 10 to 50% by weight of acrylonitrile. Therefore, it would have been obvious to one skilled in the art at the time invention was made to add styrene-acrylonitrile copolymers to the molding composition containing core-shell polymers of Hofmann in view of Morningstar et al, and obtain a mold with reduced shrinkage and improved surface hardness.

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (US 4, 180, 529) in view of Morningstar et al (US 4, 371, 677) as applied to claim 30 above, and further in view of Shah et al (US 5, 777, 034).

The discussion with respect to Hofmann in view of Morningstar et al in paragraph 5 above is incorporated here by reference.

Hofmann in view of Morningstar et al is silent with respect to the molding composition comprising 0.1 to 10.0% by weight of another polymer with a molecular weight higher by at least 10% than that of (meth)acrylic polymer.

However, Shah et al teach a methacrylate resin blend composition having improved solvent craze resistance. The improvement is achieved in a simple way while retaining the blend composition's desirable properties such as weather resistance, molding, impact resistance and mechanical properties (column 1, lines 1-10). The blend composition contains a methacrylate matrix resin, particles of a single layer polymer and optionally an acrylic multi-layer polymer. The particles of a single layer polymer have a weight average molecular weight of at least 120% of the M_w of the methacrylate matrix resin component (abstract). The simple incorporation of SLP's (single layer polymer) into the methacrylate matrix resin provides the improvement in craze resistance (column 4, line 67; column 5, lines 1-3). The matrix resin will comprise 50 to 90 wt%, the impact modifier resin from 0 to 50 wt% and the single layer polymer from 1 to 50 wt% of the blend composition (column 6, lines 42-45). Therefore, it would have been obvious to one skilled in the art at the time invention was made to add a polymer having a molecular weight of at least 120% of the M_w of methacrylate resin of Hofmann in view of Morningstar et al, in an amount of from 1 to 50 wt% and obtain a molding composition that will exhibit improved solvent craze resistance.

Response to Arguments

12. Applicant's arguments, filed 1/6/2009, with respect to rejection of claims 19 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which applicant regards as the invention; claims 24 and 32 for lack of antecedent basis; have been fully considered and are withdrawn either in view of the cancellation or amendment to the said claims.

13. Applicant's arguments filed 1/6/2009 have been fully considered but they are not persuasive. Specifically, applicant argues that (A) important aspect of present invention is the production of dispersion with relatively small amount of coagulate and Hofmann and DeWitt are silent with respect to coagulate content of any amount; (B) Takarabe et al is not germane to either the process of Hofmann or the present invention i.e. Hofmann and Takarabe et al are not combinable; (C) there is no teaching in Morningstar et al of a core-shell (meth)acrylate copolymer; and (D) Falk et al describes a method of preparing core/shell compositions under emulsion polymerization conditions and does not have any discussion on low coagulum content.

With respect to (A), given that the aqueous dispersion of Hofmann in view of DeWitt are prepared by a substantially similar process, it is the examiner's position that a relatively small amount of coagulum is intrinsically present in the aqueous dispersion of Hofmann in view of DeWitt, absent evidence of unexpected results. Furthermore, applicant's attention is drawn to the new grounds of rejection, set forth above, necessitated by amendment.

With respect to (B), Takarabe is used only for its teaching that polymerizing a monomer in the presence of film forming aids such as ethylene glycol, isopropyl benzyl alcohol and alkyl-substituted glycols having 3 to 8 carbon atoms, would result in the formation of a dispersion with low content of coagulum. Furthermore, both Hofmann and

Takarabe et al deal with emulsion polymerization process to prepare an aqueous dispersion.

With respect to (C), Morningstar et al is only used for its teaching that adding long straight chain saturated alcohol, containing from 8 to 24 carbon atoms, in the emulsifier system increases colloidal stability of the polymerization and reduces the amount of coagulum in copolymer latex.

With respect to (D), Falk et al is only used for the teaching that addition of styrene-acrylonitrile copolymer to acrylic core-shell polymer reduces mold shrinkage and improves surface hardness.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARUNA P. REDDY whose telephone number is (571)272-6566. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. P. R./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796